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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,459	02/11/2004	Hirokazu Tajima	45567-00080	8752

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EXAMINER	
SHAKERI, HADI	

ART UNIT	PAPER NUMBER
3723	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,459	TAJIMA ET AL.	
	Examiner	Art Unit	
	Hadi Shakeri	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 8-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 8-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11 February 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 8, 10 and 11 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimura et al. in view of anyone of Petroski et al. (7,025,668), Chechik et al. (6,284,114) or Hulslander et al. (3,284,274).

Fujimura et al. meets all of the limitations of claim 8, i.e., a method of manufacturing a glass substrate by polishing the glass utilizing an abrasive cloth in the final step (Abstract), except for disclosing a pad comprising a nap layer with inner and outer layer with the pores as recited. It also discloses that the abrasive cloth used is not particularly restricted to any specific one (03:58-60), and that if suede like pad is used. Petroski et al., Chechik et al. or Hulslander et al, each discloses pads having smaller open pores on the top surface and a layer under with relatively larger pores or voids.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of Fujimura et al. by using pads as taught by anyone of Petroski et al., Chechik et al. or Hulslander et al. to as an alternative means depending on the operational parameters, e.g., cost.

Regarding claim 10 and 12, Fujimura et al. as modified meets the limitations, i.e., the pad or polishing cloth (e.g., MHC15A or MHC14E) deforming between 40 to 60 micron under certain load; glass having a surface roughness of 0.15 nm (Table 3).

3. Claims 9 and 11 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over modified Fujimura et al. as applied to claim 8, above further in view of Hsu et al. (6,890,244).

Fujimura et al. as modified by Petroski et al., Chechik et al. or Hulslander et al., discloses using polyurethane pads meeting all of the limitations of claims 9 and 11, except for disclosing the number and the sized of the pores. It also discloses that the abrasive cloth used is not particularly restricted to any specific one (03:58-60), and that it uses 0.2 micron abrasives (05:26). Hsu et al. teaches polishing pads for use in CMP wherein the size of the pores are dictated by the size of the abrasive particles used, e.g., for 100 to 200 nm particles, pore sizes of 30 to 100 microns are preferred. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the modified invention of Fujimura et al. with the pore sizes, e.g., 30-100 microns, as taught by Hsu et al. to enhance the operation for the abrasive used.

Regarding the density or the number of pores, Hsu teaches the ratio of fibers to the matrix depends on the intended use, i.e., higher ratio for more compressive pad. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use

e.g., 500 pores per mm square, dependent on work-piece/operational parameters, involves only routine skill in the art, and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 8-12 are finally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-39 of U.S. Patent No. 6,736,705 in view of prior art cited above. The mentioned US Patent reads over the claimed subject matter of claims 8-12 as best understood, except for specific pad properties, all obvious to one of ordinary skill in view of prior art cited above.

6. Claims 8-12 are finally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,749,487 in view of prior art cited above. The mentioned US Patent reads over the claimed subject matter of claims 8-13

as best understood, except for specific pad properties, all obvious to one of ordinary skill in view of prior art cited above.

7. Claims 8-12 are finally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,852,003 in view of prior art cited above. The mentioned US Patent reads over the claimed subject matter of claims 8-13 as best understood, except for specific pad properties, all obvious to one of ordinary skill in view of prior art cited above.

8. Claims 8-12 are finally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,932,677 in view of prior art cited above. The mentioned US Patent reads over the claimed subject matter of claims 8-13 as best understood, except for specific pad properties, all obvious to one of ordinary skill in view of prior art cited above.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

10. Applicant's arguments with respect to claims 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is (571) 272-4495. The examiner can normally be reached on Monday-Thursday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hadi Shakeri
Primary Examiner
Art Unit 3723

July 8, 2006